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JUL 0 1 1993

Before the Federal Communications Commission
Washington, D.C. 20554

PR Docket No. 93-61

Pactel Receiver Fragility:

In a technical presentation to the North Texas Microwave Society, Mr. Marvin Fate said that a VCR Rabbit had locked up a PacTel receiver from 3 miles away. The "Rabbit" is a .1 watt 908 MHz transmitter.

As an Aerospace Engineer I have worked with the Patriot Missile System. The Patriot Missile uses a Spread Spectrum Command Link between the missile and ground control. This command link both carries target data to the missile, and determines the missile's relative range, i.e. Spread Spectrum TOA is used just like AVM systems.

For obvious reasons, the Command Link is designed to operate in the presence of Enemy Jamming. If the Jamming Noise Floor power exceeds the individual chip signal over 60% of the bandwidth, or 60% of the time with an adaptive jammer, the Patriot System still maintains a full lock!!!

For comparison, this would equivalent to a Pactel type AVM system operating with over 300 10 watt CW transmitters within their receiver's passbands. And the Patriot uses 1960's technology!!!

Adaptive Suppressive Filters are a mature technology and when properly implemented will have a negligible effect on the TOA phase.

Conclusions:

Many of the Amateur HF Bands, and most of the Amateur UHF/Microwave bands are shared with other services. We feel that we can continue to share the 902-928 MHz band with AVM and Part 15 devices.

PacTel Teletrac and the public would be better served by upgrading their cell site receivers as soon as possible.

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